

What is claimed is:

1. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:
 - a) an amino acid sequence given by SEQ ID NO:2;
 - b) a variant of an amino acid sequence given by SEQ ID NO:2, in which any amino acid specified in the chosen sequence is changed to a different amino acid, provided that no more than 15% of the amino acid residues in the sequence are so changed;
 - c) a mature form of an amino acid sequence given by SEQ ID NO:2; and
 - d) a variant of a mature form of an amino acid sequence given by SEQ ID NO:2, wherein any amino acid in the mature form of the chosen sequence is changed to a different amino acid, provided that no more than 15% of the amino acid residues in the sequence of the mature form are so changed; and
 - e) a fragment of an amino acid sequence described in paragraphs a) to d).
2. A fragment of a polypeptide described in claim 1.
3. The polypeptide of claim 1, wherein said polypeptide is a naturally occurring allelic variant of SEQ ID NO:2.
4. The polypeptide of claim 3, wherein the variant is the translation of a single nucleotide polymorphism.

5. The polypeptide of claim 1, wherein said polypeptide is a variant polypeptide, and wherein one or more of any amino acid specified in SEQ ID NO:2 is changed to provide a conservative substitution.

6. An isolated nucleic acid molecule comprising a nucleic acid sequence encoding a polypeptide comprising an amino acid sequence selected from the group consisting of:

a) a polypeptide comprising SEQ ID NO:2;

b) a variant of SEQ ID NO:2, in which any amino acid specified in the chosen sequence is changed to a different amino acid, provided that no more than 15% of the amino acid residues in the sequence are so changed;

c) a mature form of the amino acid sequence given by SEQ ID NO:2; and

d) a variant of a mature form of the amino acid sequence given by SEQ ID NO:2, wherein any amino acid in the mature form of the chosen sequence is changed to a different amino acid, provided that no more than 15% of the amino acid residues in the sequence of the mature form are so changed;

e) a fragment of an amino acid sequence described in a) to d); and

f) the complement of any of the nucleic acid molecules described in paragraphs a) to e).

7. The nucleic acid molecule of claim 6, wherein the nucleic acid molecule comprises the nucleotide sequence of a naturally occurring allelic nucleic acid variant.

8. The nucleic acid molecule of claim 6, wherein said nucleic acid molecule encodes a variant polypeptide that has the polypeptide sequence of a naturally occurring polypeptide variant.

9. The nucleic acid molecule of claim 6, wherein the nucleic acid molecule comprises a single nucleotide polymorphism encoding said variant polypeptide.

10. The nucleic acid molecule of claim 6, wherein said nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of

a) a nucleotide sequence given by SEQ ID NO:1;

b) a nucleotide sequence wherein one or more nucleotides in a nucleotide sequence given by SEQ ID NO:1 is changed from that given by the chosen sequence to a different nucleotide provided that no more than 20% of the nucleotides are so changed;

c) a nucleic acid fragment of the sequence described in a);

d) a nucleic acid fragment of the sequence described in b); and

e) the complement of any of said nucleic acid molecules.

11. The nucleic acid molecule of claim 6, wherein the nucleic acid molecule comprises a nucleotide sequence in which any nucleotide specified in the coding sequence of the chosen nucleotide sequence is changed from that given by the chosen sequence to a different nucleotide provided that no more than 20% of the nucleotides in the chosen coding sequence are so changed.

12. An isolated nucleic acid molecule encoding a fragment of an FGF-CX polypeptide.

13. The nucleic acid molecule of claim 12, wherein said FGF-CX polypeptide is a variant of SEQ ID NO:2.

14. The nucleic acid molecule of claim 12, wherein said FGF-CX polypeptide is a mature FGF-CX polypeptide.

15. The nucleic acid molecule of claim 12, wherein said FGF-CX polypeptide is a variant of a mature form of SEQ ID NO:2.

16. A vector comprising the nucleic acid molecule of claim 6.

17. A cell comprising the vector of claim 16.

18. An antibody that binds immunospecifically to the polypeptide of claim 1.

19. The antibody of claim 18, wherein said antibody is a monoclonal antibody.

20. The antibody of claim 18, wherein the antibody is a humanized antibody or a human antibody.

21. A method for determining the presence or amount of a polypeptide of claim 1 in a sample, the method comprising:

- (a) providing the sample;
- (b) contacting the sample with an antibody that binds immunospecifically to the polypeptide; and
- (c) determining the presence or amount of antibody bound to said polypeptide, thereby determining the presence or amount of polypeptide in said sample.

22. A method for determining the presence or amount of a nucleic acid molecule of claim 6 in a sample, the method comprising:

- (a) providing the sample;
- (b) contacting the sample with a probe that binds to said nucleic acid molecule; and
- (c) determining the presence or amount of the probe bound to said nucleic acid molecule,

thereby determining the presence or amount of the nucleic acid molecule in said sample.

23. A method for identifying an agent that binds to a polypeptide of claim 1, the method comprising:

- (a) contacting said polypeptide with a candidate substance; and
 - (b) determining whether said candidate substance binds to said polypeptide;
- wherein a candidate substance that binds is the agent.

24. The method of claim 23 wherein the candidate substance has a molecular weight not more than about 1500 Da.

25. A method for modulating an activity of the polypeptide of claim 1, the method comprising contacting the polypeptide with a compound that binds to the polypeptide in an amount sufficient to modulate the activity of the polypeptide.

26. A method for identifying a potential therapeutic agent for use in treatment of a pathology, wherein the pathology is related to aberrant expression, aberrant processing, or aberrant physiological interactions of a polypeptide of claim 1, the method comprising:

- (a) providing a cell expressing the polypeptide and having a property or function ascribable to the polypeptide;
- (b) contacting the cell provided in step (a) with a test agent; and
- (c) determining whether the test agent alters the property or function ascribable to the polypeptide;

whereby an alteration of the property or function of the polypeptide observed in the presence of the test agent indicates the test agent is a potential therapeutic agent.

27. The method of claim 26, further comprising subjecting the potential therapeutic agent to additional tests to identify the therapeutic agent.

28. The method of claim 26, wherein the candidate substance is an antibody or has a molecular weight not more than about 1500 Da.

29. The method of claim 26, wherein the property or function comprises cell growth or cell proliferation.

30. The method of claim 29, wherein the test agent binds to the polypeptide.

31. A therapeutic agent identified according to the method of claim 26.

32. A therapeutic agent identified using the method of claim 27.

33. The therapeutic agent of claim 31, wherein the agent is an antibody or has a molecular weight not more than about 1500 Da.

34. A method of treating or preventing a disorder associated with a polypeptide described in claim 1, wherein the disorder is characterized by insufficient or ineffective growth of a cell or a tissue, said method comprising administering to a subject a polypeptide of claim 1 in an amount and for a duration sufficient to treat or prevent said polypeptide-associated disorder in said subject, wherein the subject is thought to be prone to or to be suffering from the disorder.

35. The method of claim 34, wherein said subject is a human.

36. A method of treating or preventing a disorder associated with aberrant expression, aberrant processing, or aberrant physiological interactions of a protein described in claim 1, wherein the disorder is characterized by insufficient or ineffective growth of a cell or a tissue, said method comprising administering to a subject a nucleic acid described in claim 6 in an amount and for a duration sufficient to treat or prevent said disorder in said subject, wherein the subject is thought to be prone to or to be suffering from the disorder.

37. The method of claim 36, wherein said subject is a human.

38. A method of treating or preventing a disorder associated with aberrant expression, aberrant processing, or aberrant physiological interactions of a polypeptide described in claim 1, wherein the disorder is characterized by hyperplasia or neoplasia of a cell or a tissue, said method comprising administering to a subject a Therapeutic in an amount sufficient to treat or prevent said disorder in said subject, wherein the subject is thought to be prone to or to be suffering from the disorder.

39. The method described in claim 38 wherein the Therapeutic is the antibody described in claim 18.

40. The method of claim 38, wherein the subject is a human.

41. A pharmaceutical composition comprising the polypeptide of claim 1 and a pharmaceutically acceptable carrier.

42. A pharmaceutical composition comprising the nucleic acid molecule of claim 6 and a pharmaceutically acceptable carrier.

43. A pharmaceutical composition comprising the antibody of claim 18 and a pharmaceutically acceptable carrier.

44. A pharmaceutical composition comprising the therapeutic agent of claim 31 and a pharmaceutically acceptable carrier.

45. The pharmaceutical composition of claim 44, wherein the therapeutic agent has a molecular weight not more than about 1500 Da.

46. A kit comprising in one or more containers a pharmaceutical composition of claim 41.

47. A kit comprising in one or more containers a pharmaceutical composition of claim 42.

48. A kit comprising in one or more containers a pharmaceutical composition of claim 43.

49. A method for screening for a modulator of latency or predisposition to a disorder associated with aberrant expression, aberrant processing, or aberrant physiological interactions of a polypeptide described in claim 1, said method comprising:

- a) providing a test animal at increased risk for the disorder and wherein said test animal recombinantly expresses the polypeptide of claim 1;
- b) administering a test compound to the test animal;
- c) measuring an activity of said polypeptide in said test animal after administering the compound of step (a); and
- d) comparing the activity of said protein in said test animal with the activity of said polypeptide in a control animal not administered said compound;

wherein a change in the activity of said polypeptide in said test animal relative to said control animal indicates the test compound is a modulator of latency of or predisposition to the disorder.

50. The method of claim 49, wherein said test animal is a recombinant test animal that expresses a test protein transgene or expresses said transgene under the control of a promoter at an increased level relative to a wild-type test animal, and wherein said promoter is not the native gene promoter of said transgene.

51. A method for determining the presence of or predisposition to a disease associated with altered levels of a polypeptide described in claim 1 in a first mammalian subject, the method comprising:

- a) measuring the level of expression of the polypeptide in a sample from the first mammalian subject; and

b) comparing the amount of said polypeptide in the sample of step (a) to the amount of the polypeptide present in a control sample from a second mammalian subject known not to have, or not to be predisposed to, said disease,

wherein an alteration in the expression level of the polypeptide in the first subject as compared to the control sample indicates the presence of or predisposition to said disease.

52. A method for determining the presence of or predisposition to a disease associated with altered levels of a nucleic acid molecule described in claim 6 in a first mammalian subject, the method comprising:

a) measuring the amount of the nucleic acid in a sample from the first mammalian subject; and

b) comparing the amount of said nucleic acid in the sample of step (a) to the amount of the nucleic acid present in a control sample from a second mammalian subject known not to have or not be predisposed to, the disease;

wherein an alteration in the level of the nucleic acid in the first subject as compared to the control sample indicates the presence of or predisposition to the disease.

53. A method of treating a pathological state in a mammal, wherein the pathology is related to aberrant expression, aberrant processing, or aberrant physiological interactions of a polypeptide described in claim 1, the method comprising administering to the mammal a polypeptide in an amount that is sufficient to alleviate the pathological state, wherein the polypeptide is a polypeptide having an amino acid sequence at least 95% identical to a polypeptide comprising an amino acid sequence of SEQ ID NO:2, or a biologically active fragment thereof.

54. A method of treating a pathological state in a mammal, wherein the pathology is related to aberrant expression, aberrant processing, or aberrant physiological interactions of an FGF-CX polypeptide, the method comprising administering to the mammal an antibody described in claim 18 in an amount and for a duration sufficient to alleviate the pathological state.

55. A method of promoting growth of cells in a subject comprising administering to a subject in need thereof a polypeptide described in claim 1 in an amount and for a duration that are effective to promote cell growth.

56. The method of claim 55, wherein the subject is a human.

57. The method described in claim 55 wherein the cells whose growth is to be promoted are chosen from the group consisting of cells in the vicinity of a wound, cells in the vascular system, cells involved in hematopoiesis, cells involved in erythropoiesis, cells in the lining of the gastrointestinal tract, and cells in hair follicles.

58. A method of inhibiting growth of cells in a subject, wherein the growth is related to expression of a polypeptide described in claim 1, comprising administering to the subject a composition in an amount sufficient to inhibit growth of cells in said subject.

59. The method of claim 58, wherein the composition inhibits the cleavage of an FGF-CX polypeptide.

60. The method of claim 58, wherein the composition comprises an ant FGF-CX antibody or a FGF-CX therapeutic agent.

61. The method of claim 58, wherein the subject is a human.

62. The method of claim 58, wherein the cells whose growth is to be inhibited are chosen from the group consisting of transformed cells, hyperplastic cells, tumor cells, and neoplastic cells.

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